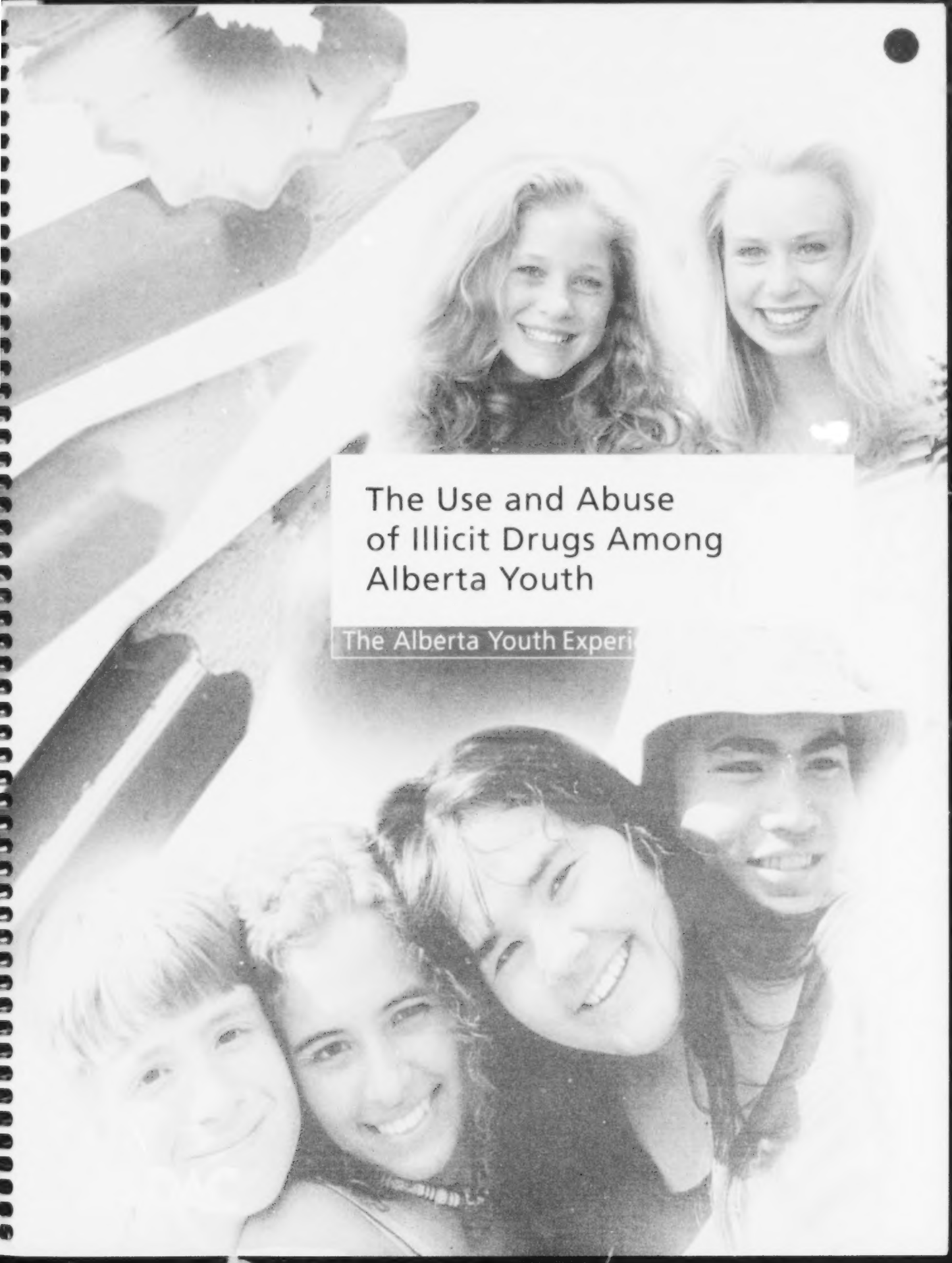


The Use and Abuse of Illicit Drugs Among Alberta Youth

The Alberta Youth Experi

TABLE OF CONTENTS

INTRODUCTION 3

METHODOLOGY 5

- Sample 5
- Ethics 5
- Questionnaire and Procedure 5
- Data Analysis 5
- Limitations 6

RESULTS 7

- Drug Use, Demographic, and Risk Factors Among Alberta Youth 7
- Frequency and Consequences of Drug Use Among Drug Users 12

DISCUSSION 15

- Summary or Major Findings 15
- Implications 16
- Summary and Conclusions 17

REFERENCES 18

TABLES

Table 1: Per Cent of Alberta Youth Using Each Illicit Drug By Demographic Subgoups 8

Table 2: Ease of Access Reported by Alberta Youth 9

Table 3: Correlations Between Frequency of Drug Use and Risk Factors for Alberta Youth 10

Table 4: Drug Use of Close Friends for Alberta Youth 10

Table 5: Correlations Between Ease of Access and Drug Use of Close Friends for Alberta Youth* 11

Table 6: Frequency of Cannabis Use by Parental Approval Among Alberta Youth 11

Table 7: Per Cent of Illicit Drug Users Reporting Each Category of Drug Use Frequency 12

FIGURES

Figure 1: Number of Illicit Drugs Used by Alberta Youth 7

Figure 2: Per Cent of Alberta Youth Using Each Illicit Drug 7

Figure 3: Per Cent of Cannabis Users Reporting Each Category of Cannabis Use Frequency 13

Figure 4: Per Cent of Cannabis Users Reporting Indicators of Cannabis Dependence 13

Figure 5: Per Cent of Cannabis Users Reporting Each Indicator of Cannabis Dependence 13

Prepared by: Christie D. Malcolm
Research Services, Alberta Alcohol and Drug Abuse Commission
November 14, 2003

Author Note

The Alberta Youth Experience Survey (TAYES) 2002 was a provincial study commissioned by the Alberta Alcohol and Drug Abuse Commission. The author would like to acknowledge the students and staff of the participating schools and Art Dyer (Manager, AADAC Research Services) for his support and guidance.

104-03486/

INTRODUCTION

The Alberta Youth Experience Survey 2002 (TAYES) sought to

- answer questions about the proportion of Alberta youth who gambled or used alcohol, tobacco, and other drugs
- answer questions about the proportion of youth who used substances or participated in gambling in a harmful way
- investigate important factors that increased protection from or increased the risk that adolescents would use or abuse substances or gambling

Three reports previous to this one have been published based on TAYES: the *Summary Report* (Alberta Alcohol and Drug Abuse Commission [AADAC], 2003), the *Technical Report* (AADAC, 2003) and the *Overview of Risk and Protective Factors* (George, Dyer & Levin, 2003). This report is one of a series of special topical reports. Each topical report focuses on one aspect of substance use or gambling among Alberta youth, providing greater detail on TAYES results and relevant literature than is contained in the *Summary Report*. Topical reports are intended for use by professional educators and addictions prevention workers.

The purpose of this topical report is to focus on the results from the 2002 Alberta Youth Experience Survey regarding the use and abuse of cannabis and other illicit drugs. This brief report examines the relationships between illicit drug use, demographic characteristics and selected risk factors directly concerned with drug use.

This paper will discuss the following:

Among Alberta Youth

- the prevalence of drug use among Alberta youth
- the demographic influences on drug use among Alberta youth
- the influence of specific risk factors on drug use among Alberta youth

Among Drug-Using Alberta Youth

- patterns of drug use among drug users
- frequency of drug use among drug users
- cannabis dependence and treatment among cannabis users

Effective prevention planning requires scientific knowledge about the prevalence of drug use, the patterns of drug use, and the determinants of drug use (Centre for Addiction and Mental Health [CAMH], 1999; Cuijpers, 2002; Levin & George 2003). TAYES is based on the risk and protective factors framework (Hawkins, Catalano & Miller, 1992), which identifies those influences in an individual's life that increase the risk of substance use/abuse (risk factors) and those that mitigate or moderate the risk of substance use/abuse (protective factors). Evidence to date suggests that the comprehensive use of this framework can reduce problematic adolescent behaviour, including substance abuse (Cuijpers, 2002; Hawkins et al., 1992).

This report examines factors that previous research has found to be related to the use of drugs. Previous research has identified gender and grade in school as significant factors in adolescent drug use (Adlaf & Paglia, 2001; George, Dyer & Levin, 2003; Health Canada, 2001; Levin & George, 2003; Poulin, 2002) and effective prevention initiatives should be matched to their target age, gender and level of use (CAMH, 1999). Whether or not a youth lives with both natural parents is also related to youth drug use (George et al., 2003; Hawkins et al., 1992; Levin & George, 2003). Additionally, attention and sensitivity to cultural norms is important in the development of effective interventions (Hawkins et al., 1992; Health Canada, 2001; Levin & George, 2003).

Ease of access to drugs has been identified as an important factor in drug use (George et al., 2003; Hawkins et al., 1992; Levin & George, 2003). Accessibility is related to cultural norms (which also influence laws and enforcement

of laws), affordability, personal drug use, peer drug use, and parental drug use.

Peer drug use has been identified as one of the most important factors in predicting drug use among adolescents (George et al., 2003; George, Munro, & Huebert, 2002; Hawkins et al., 1992; Health Canada, 2001; Levin & George, 2003). In fact, the influence of peers surpasses that of parents as youth age (Hawkins et al., 1992; Levin and George, 2003). Peer use also serves to increase the ease of access to drugs.

Finally, parental attitudes toward drug use are related to youth drug use and may even be more important than the actual use of drugs by parents (George et al., 2003; Hawkins et al., 1992; Levin & George, 2003).

It is important to note here that the presence of risk factors does not cause risk behaviours (George et al., 2002). The various risk factors interact and influence each other in adversely affecting behaviour. Additionally, protective factors work to buffer the negative effects of risk factors. The framework is cumulative and interactive. The factors featured in this report were selected on the basis of their direct relevance to the use of illicit drugs. Several other TAYES topical reports will focus on results regarding risk and protective factors in detail.

METHODOLOGY

This report is based on secondary analysis of data collected for TAYES, 2002. Methods for the survey are reported in detail in *The Alberta Youth Experience Survey 2002: Technical Report* (AADAC, 2003).

Sample

The study was based on a sample of 3,394 Alberta youth obtained in a school survey among youth in grades 7 to 12 in October and November, 2002. The sample was designed as a stratified random cluster sample with selection proportionate to size. The sample was stratified by five regions, aggregated from regional health authority boundaries as they existed in April 2002, and by grade in school. Youth were selected from randomly selected classrooms in 89 schools in 39 school divisions.

Ethics

Ethics approval was obtained from a duly constituted ethics review board consistent with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans and Alberta's Health Information Act. The survey was conducted in compliance with the Freedom of Information and Protection of Privacy Act. Active, informed parental consent was required. Youth and parent names were kept private by the schools that participated in the survey and research staff had no access to these names.

Questionnaire and Procedure

The survey and survey processes were pre-tested in a single school with youth in grades 7 through 12 (the French language version of the questionnaire was pre-tested with a French immersion class). Research staff administered the 84-question self-report survey in October and November of 2002. The Technical Report outlines measures taken to reduce misrepresentation by youth answering the questionnaire. The response rate of 52% is consistent with similar surveys using active, informed consent.

Data Analysis

All percentages included in this report are based on weighted data for accurate representation of the Alberta youth population. Statistical tests to determine if relationships are significant enough to generalize to the larger population of Alberta youth were conducted using unweighted data and a significance level of less than 0.0005. Missing values were not included in the analyses unless otherwise noted.

Prevalence of Drug Use Among Alberta Youth

In The Alberta Youth Experience Survey, youth were asked to identify which of 11 illicit drugs they had used during the last 12 months. The drugs examined were:

- Cannabis: marijuana, hash, pot, hash oil
- Cocaine (other than crack cocaine)
- Crack (freebase cocaine)
- Hallucinogens: LSD, PCP, etc
- Inhalants: glue, gas, whiteout, etc.
- Uppers: uppers without a prescription
- Downers: downers without a prescription
- Club Drugs: ecstasy, crystal meth
- Steroids
- Heroin/Opium
- Mushrooms/Mescaline: magic mushrooms, shrooms, mesc

Relationship Between Drug Use and Demographic Characteristics Among Alberta Youth

Youth were classified as either users or non-users of the various illicit drugs. Users of a given substance were defined as those youth who reported using the substance one or more times during the last year. Chi-square and correlational analyses were conducted to determine if there were significant relationships between the use of drugs and the various demographic characteristics. The demographic variables examined for relationships were: gender,

school grade, living arrangement (both natural parents versus other), ethnicity (Aboriginal versus non-Aboriginal), youth's weekly income, region of Alberta, and location size.

Relationship Between Risk Factors and the Frequency of Use Among Alberta Youth

Correlational analyses were conducted to determine if there were significant relationships between the risk factors and the frequency of drug use. The following risk factors were examined for relationships:

1. Ease of Access

Youth were asked to identify whether each substance was extremely difficult, difficult, easy, or extremely easy to obtain.

2. Peer Drug Use Behaviour

Youth were asked whether none, a few, most, or all of their close friends (a) have tried cannabis, (b) use cannabis regularly, and (c) have tried drugs other than cannabis.

3. Parental Approval of Drug Use by Youth

Youth were asked to rate whether their parents strongly disapprove, disapprove, neither approve nor disapprove, approve or strongly approve of drug use by the youth.

Frequency of Drug Use Among Users of the Drug

In addition to asking which drugs were used, TAYES also inquired into the frequency with which they were used during the past year. The frequency with which users used each substance was examined.

Patterns of Drug Use

Both single-substance users and poly-substance users were examined in regards to the types of drugs used for descriptive purposes.

Cannabis Dependence and Treatment

Three indicators of cannabis dependence were examined: (a) uncontrolled use, (b) sustained daily use, and (c) recent attempts to reduce use (Adlaf & Paglia, 2001). The proportion of cannabis users responding positively to each indicator was examined. In addition, the classification of "potential cannabis dependence" was defined as a positive response to the "uncontrolled use" question and either the "sustained daily use" or the "recent attempts to reduce" question. The percentage of users reporting that they received treatment for their use of cannabis during the past year was examined for both cannabis users and potentially dependent cannabis users.

Limitations

Methodological limitations of the Alberta Youth Experience Survey 2002 are identified in the *TAYES Technical Report* (AADAC, 2003). Only additional limitations relevant to this analysis are identified here.

Using a multi-stage stratified sample design requires weighting to adjust the sample proportions to reflect the sub-population values in their true proportions. Implications of using weighted data are 1) if the sample is not representative of the strata, applying a weight factor will exaggerate the bias and 2) using weighted data will increase the level of significance. As a result, frequencies reported are based on weighted data for accurate representation of the population while statistical tests were conducted on unweighted data to more accurately estimate the significance level.

The low prevalence of use of some drugs, combined with the small number of youth in some of the subgroups, precluded the use of statistical tests for some proportional differences. Significant proportional differences are identified for only those cases where there were at least 10 observed cases in each grouping.

The results of this report should be interpreted in the broader context of the risk and protective factors framework. Additionally, none of the research to date, nor this study, allows for the conclusion that significant factors cause drug use. It is possible that some factors are just indicators of use while others may be true causes.

RESULTS

Drug Use, Demographic and Risk Factors Among Alberta Youth

Prevalence of Drug Use Among Alberta Youth During the Past 12 Months

Most youth (68.6%) reported no use of illicit drugs during the last 12 months (Figure 1). Eighteen per cent of youth (18%) reported that they used only one drug during the last year while 7% used two drugs, 3% used three drugs and less than 5% of youth used four drugs or more during the last 12 months. By far the most commonly used illicit substance was cannabis. 27.6% of youth surveyed reported the use of cannabis during the last 12 months (Figure 2). Almost 90% (89.6%) of youth reported no use of illicit drugs other than cannabis during the last year.

Besides cannabis, the most commonly used illicit drug was mushrooms/mescaline with 10.4% of youth sampled reporting use. The next most commonly used drugs were inhalants (5.6%)

Figure 1: Number of Illicit Drugs Used by Alberta Youth

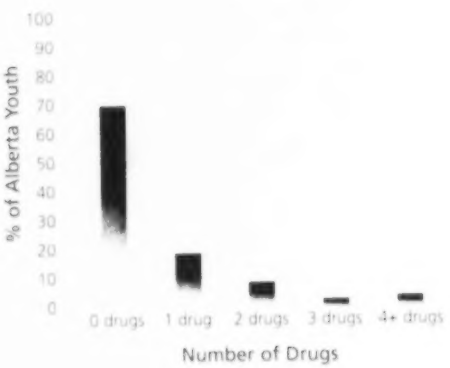
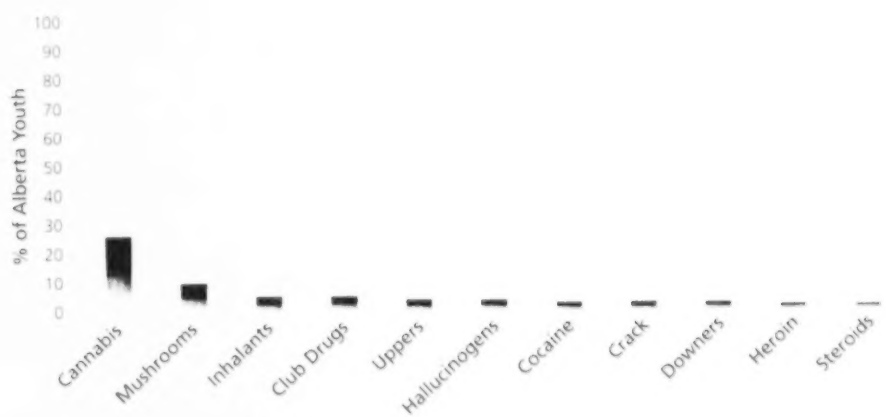


Figure 2: Per Cent of Alberta Youth Using Each Illicit Drug



and club drugs (5.3%), followed by uppers without a prescription (4.0%), hallucinogens (3.9%), cocaine (2.9%), crack cocaine (2.8%), downers without a prescription (2.3%), heroin/opium (1.4%) and finally steroids (1.2%).

Demographic Influences on Drug Use Among Alberta Youth

Cannabis Use. The prevalence of past-year cannabis use was examined in relation to the various demographic characteristics. There were no significant differences in the proportion of youth using cannabis based on gender or the size of the community in which they lived (location size). Table 1 displays the significant relationships between drug use and demographic characteristics. There was a statistically significant, positive correlation between grade and past-year use of cannabis. The increase appears to be especially marked as youth enter Grade 10 and levels off during high school.

Regional differences in cannabis use were also found. However, cannabis use varied enough within regions that the differences in use between any two regions could not be discerned with confidence. The difference in proportions of cannabis use between Aboriginal (52.1%) and non-Aboriginal youth (26.8%) was statistically significant as was the difference between those who reported living with both their natural parents (22.9%) and those in other living situations

Table 1: Per Cent of Alberta Youth Using Each Illicit Drug: By Demographic Subgoups

Demographic		Cannabis %	Cocaine %	Crack %	Hallucinogens %	Uppers %	Downers %	Club Drugs %	Mushrooms %
Grade in School	7-9	11.8	0.5	0.8	1.6	2.1	1.7	2.7	5.0
	10-12	41.9	5.1	4.7	6.1	5.6	2.9	7.6	15.3
Region	North	23.2 (+/- 5.0)	-	-	-	-	-	-	7.5 (+/- 2.6)
	Edmonton	31.1 (+/- 6.6)	-	-	-	-	-	-	10.2 (+/- 3.7)
	Central	27.5 (+/- 6.8)	-	-	-	-	-	-	12.8 (+/- 3.5)
	Calgary	30.9 (+/- 11.8)	-	-	-	-	-	-	12.8 (+/- 7.3)
	South	17.3 (+/- 4.7)	-	-	-	-	-	-	5.8 (+/- 2.2)
Ethnicity	Non-Aboriginal	26.8	-	-	-	-	-	-	9.8
	Aboriginal	52.1	-	-	-	-	-	-	30.2
Living Arrangement	Both Natural Parents	22.9	2.1	-	3.0	3.7	2.1	4.8	7.7
	Other	39.1	5.1	-	6.2	4.6	2.9	6.5	17.0
Weekly Income	Less than $5	13.9	-	-	0.0	0.0	-	0.0	5.7
	$6 - $10	17.4	-	-	2.3	0.3	-	3.4	7.0
	$11 - $20	25.0	-	-	0.5	1.8	-	3.0	7.3
	$21 - $30	26.5	-	-	1.2	4.5	-	2.7	11.8
	$31 - $40	28.5	-	-	3.1	14.4	-	6.2	4.3
	$41 - $50	43.2	-	-	0.7	18.0	-	4.3	4.8
	More than $50	57.7	-	-	25.1	4.0	-	15.9	31.7

(39.1%). Additionally, youth's weekly income displayed a significant correlation with cannabis use: those reporting a higher weekly income were more likely to report use of cannabis during the last year.

Use of Other Drugs. The past-year use of drugs other than cannabis was also examined in relation to the various demographic subgroups. As with cannabis, there were no significant differences in the proportion of youth using other illicit drugs based on gender or the number of people living in the community (location size). Additionally, inhalant use, steroid use and heroin/opium use were not significantly related to any of the demographic characteristics. Table 1 displays the proportion of users within demographic subgroups for which there were significant differences. Grade in school was significantly related to the use of all illicit drugs except steroids, heroin/ opium and inhalants. With these exceptions, the prevalence of drug use was higher in grades 10 through 12 than in grades 7 through 9.

As with cannabis, regional differences in mushroom/ mescaline use were found. However, use varied enough within regions that the differences in use between any two regions could not be discerned with confidence. The use of mushrooms/mescaline was also significantly related to ethnicity, the proportion of Aboriginal users (30.2%) being higher than that of non-Aboriginals (9.8%). The use of cocaine, hallucinogens, uppers, downers, club drugs and mushrooms/mescaline was significantly lower among youth who reported living with both natural parents than among youth who reported living in other situations. Youth's weekly income showed a significant correlation with the use of hallucinogens, mushrooms/mescaline, club drugs and uppers.

Risk Factors and the Frequency of Use Among Alberta Youth

Ease of Access

Excluding those youth who did not know the ease of access, most drugs were rated as difficult or extremely difficult to obtain (Table 2). The exceptions to this were inhalants, cannabis and mushrooms/mescaline, which most youth reported as easy or extremely easy to obtain. The substances that had the most youth reporting they are "extremely difficult" to obtain were heroin/opium, cocaine, crack and hallucinogens.

Table 2: Ease of Access Reported by Alberta Youth

	Extremely Difficult (%)	Fairly Difficult (%)	Fairly Easy (%)	Extremely Easy (%)
Cannabis	21.9	12.8	30.1	35.2
Cocaine	53.2	24.8	15.9	6.1
Crack	55.0	23.0	15.5	6.6
Hallucinogens	56.7	18.8	14.5	9.9
Inhalants	17.6	3.1	13.4	65.9
Uppers	48.8	23.3	16.3	11.6
Downers	50.0	24.0	15.7	10.4
Club Drugs	43.0	17.7	25.2	14.1
Steroids	52.5	24.0	16.3	7.1
Heroin	63.9	19.6	11.2	5.2
Mushrooms	31.0	15.7	28.7	24.6

All substances showed a significant positive correlation between the ability to obtain the drug and the frequency at which it was used (Table 3). In other words, the easier the perceived access is to a drug, the more frequently the drug is used. The relationship between ease of access and the frequency of use was strongest for cannabis and mushrooms/mescaline and weakest for inhalants and steroids.

Peer Drug Use Behaviour

Fifty-six per cent (55.7%) of youth have close friends who have tried cannabis, 46.7% have friends who have tried drugs other than cannabis and 37.8% have friends who use cannabis regularly (Table 4).

In general, youth who report having more close friends who are involved in substance use also use drugs more frequently themselves (Table 3). Cannabis, mushrooms/mescaline and club drugs showed the strongest relationship with peer-use factors. Steroids, heroin/opium and inhalants showed the weakest relationships (although most were still significant). While all three peer-use factors were significantly correlated with the frequency of drug use, having close friends who use cannabis regularly was the strongest factor for all drugs except inhalants, which was most strongly related to close friends trying drugs other than cannabis. The frequency of cannabis use was almost equally related to having close friends that have tried cannabis and having close friends who use cannabis regularly and less so for having close friends who have tried other drugs.

Table 3: Correlations Between Frequency of Drug Use and Risk Factors for Alberta Youth

	Ease of Access (r)	Close Friends Tried Cannabis (r)	Close Friends Use Cannabis Regularly (r)	Close Friends Tried Other Drugs (r)	Parental Approval (r)
Cannabis	0.50*	0.64*	0.64*	0.47*	0.30*
Cocaine	0.24*	0.20*	0.21*	0.20*	0.08*
Crack	0.23*	0.17*	0.19*	0.19*	0.10*
Hallucinogens	0.26*	0.21*	0.23*	0.19*	0.18*
Inhalants	0.12*	0.10*	0.08*	0.12*	0.09*
Uppers	0.36*	0.23*	0.26*	0.24*	0.18*
Downers	0.27*	0.19*	0.21*	0.18*	0.17*
Club Drugs	0.31*	0.26*	0.29*	0.27*	0.21*
Steroids	0.12*	0.05	0.07*	0.05	0.03
Heroin	0.16*	0.10*	0.11*	0.11*	0.08*
Mushrooms	0.37*	0.40*	0.44*	0.37*	0.34*

** significant, p<0.0001*

Table 4: Drug Use of Close Friends for Alberta Youth

	None	A few	Most	All
Close Friends Tried Cannabis	44.3%	27.5%	18.2%	10.1%
Close Friends Use Cannabis Regularly	62.2%	25.1%	10.8%	1.9%
Close Friend Tried Other Drugs	53.3%	36.2%	8.4%	2.1%

Peer substance-use behaviour and ease of access were significantly correlated for all substances (Table 5).

Parental Approval of Youth Drug Use

The proportion of youth reporting that their parents approve of drug use was minimal. Fewer than 5% of youth reported that their parents approve of or strongly approve of their use of drugs. In contrast, 87% reported that their parents strongly disapprove of drug use.

There was a significant relationship between parental approval and the frequency of use for all substances except steroids (Table 3). As perceived parent approval for drug use increases, so does the frequency with which youth report using drugs. However, the relationship of drug use frequency with parental approval is not as strong as the relationships with peer drug use and ease of access. The strongest relationships between parental approval and the frequency of drug use were seen for cannabis, mushrooms/mescaline and club drugs (in that order). The weakest relationships were between parental approval and frequency using steroids, heroin/opium, cocaine and inhalants. An interesting note

Table 5: Correlations Between Ease of Access and Drug Use of Close Friends for Alberta Youth*

	Close Friends Tried Cannabis (r)	Close Friends Use Cannabis Regularly (r)	Close Friend Tried Other Drugs (r)
Cannabis	0.64	0.60	0.51
Cocaine	0.43	0.40	0.43
Crack	0.39	0.37	0.41
Hallucinogens	0.45	0.44	0.43
Inhalants	0.22	0.20	0.20
Uppers	0.43	0.41	0.43
Downers	0.43	0.41	0.44
Club Drugs	0.54	0.51	0.51
Steroids	0.39	0.35	0.39
Heroin	0.36	0.36	0.40
Mushrooms	0.63	0.58	0.56

**All correlations were significant, p<0.0001*

Table 6: Frequency of Cannabis Use by Parental Approval Among Alberta Youth

	No Use(%)	1-2 Times(%)	3-5 Times(%)	6-9 Times(%)	10-20 Times %	21+ Times(%)
Strongly Disapprove	83.2	6.3	3.0	2.0	1.7	3.7
Disapprove	47.0	14.8	6.8	4.7	7.6	19.1
Neither Disapprove nor Approve	30.0	15.0	15.0	5.0	0.0	35.0
Approve	45.9	6.1	6.1	3.1	4.1	34.7
Strongly Approve	78.6	7.1	0.0	0.0	0.0	14.3

about the cannabis findings is that for those youth who report strong parental approval of drug use, there appears to be two clusters of youth: those who don't use cannabis at all (or very rarely), and those who use cannabis quite frequently (Table 6).

The effect of parental approval appears to be even stronger when those who report "strong" parental disapproval are compared to the rest of the youth. These findings suggest that parental approval of drug use has an effect on whether or not youth use drugs, but – more importantly – that strong parental disapproval in particular appears to have a mitigating effect on drug use.

Summary of Risk Factors

Generally speaking, the frequency of use of most substances was related to ease of access, peer drug use, and parental approval of drug use. Ease of access was most strongly related to most substances. The exceptions to this were cannabis, mushrooms/mescaline and inhalants, which were most strongly related to the peer factors. Peer substance-use factors were generally second in association strength, followed by parental approval.

Frequency and Consequences of Drug Use Among Drug Users

Patterns of Drug Use Among Users

Of those students who reported using at least one illicit substance during the previous 12 months, about half (56%) reported using just one drug. For four out of five of them (80%), the drug used was cannabis. Thirteen per cent reported inhalants as the drug used while fewer than 2% reported uppers, downers, club drugs or steroids as the only drug used. Less than 1% reported cocaine/crack, hallucinogens, or mushrooms/mescaline as the only drug used and no youth reported that the only drug they used was heroin/opium.

Of those youth who reported using more than one drug, 92.7% reported cannabis as one of the drugs used during the last year. The other substances most frequently used by poly-drug users were mushrooms/mescaline, club drugs, hallucinogens and uppers.

Table 7: Per Cent of Illicit Drug Users Reporting Each Category of Drug Use Frequency

	1-2 Times (%)	3-5 Times (%)	6-9 Times (%)	10-20 Times (%)	21 Times + (%)
Cannabis	32.2	16.4	11.2	11.7	28.4
Mushrooms	38.3	28.4	16.3	8.9	8.2
Inhalants	68.9	10.1	9.5	4.7	6.8
Club Drugs	46.6	21.4	14.0	11.3	6.6
Uppers	54.2	15.5	7.9	3.7	18.7
Hallucinogens	48.0	13.9	21.8	10.7	5.6
Cocaine	62.9	20.7	14.0	2.4	0.0
Crack	71.0	9.5	18.5	0.0	1.0
Downers	77.8	12.4	2.4	4.0	3.4
Heroin	84.7	13.2	1.9	0.0	0.2
Steroids	71.6	17.3	0.9	3.3	7.0

Figure 3: Per Cent of Cannabis Users Reporting Each Category of Cannabis Use Frequency

Figure 4: Per Cent of Cannabis Users Reporting Indicators of Cannabis Dependence

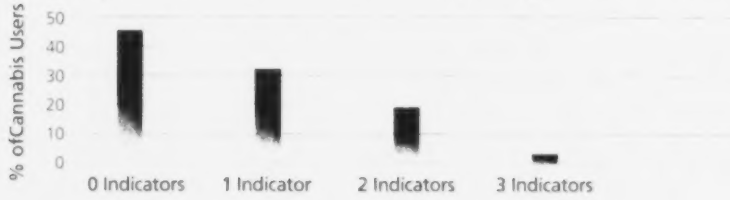


Figure 5: Per Cent of Cannabis Users Reporting Each Indicator of Cannabis Dependence

Frequency of Drug Use Among Users of the Drug

Of those youth who reported the use of cannabis, approximately one in three (32.2%) said that they only used cannabis once or twice during the last year while 28.4% used 21 times or more (Table 7 and Figure 3).

For substances other than cannabis, most users (between 38.3% and 84.7%, depending on the substance) reported that they used the substance only once or twice during the last year (Table 7).

Uppers without a prescription had the largest percentage of users reporting use 10 times or more during the past year (22.4%). Club drugs, mushrooms/mescaline and hallucinogens were also used relatively frequently (16.3% to 17.9% of users reported using 10 times or more). Heroin/opium, crack and cocaine had the smallest percentage of users reporting use more than 10 times during the last year (0.2% to 2.4%), and most users of these substances reported using them only once or twice during the last year.

Cannabis Dependence and Treatment

As displayed in Figure 4, almost half of past-year cannabis users (46.2%) reported no indicators of cannabis dependence. Approximately one in three (33.1%) had one indicator of cannabis dependence, 18.7% had two indicators, and 2.0% had all three indicators of cannabis dependence. Figure 5 displays the percentage of users reporting each indicator. Almost half of users (47.2%) reported that they had tried to cut down on their use of cannabis during the last year. About one in three (33.7%) reported that they used cannabis every day or almost every day for at least a month in their lives. Only 3.4% reported that they had ever tried unsuccessfully to stop using cannabis.

The proportion of cannabis users demonstrating potential dependence was 3.1%. Potential dependence was especially high among youth who reported using cannabis more than 20 times during the last year with 9.0% of them showing signs of potential dependence.

Three per cent (3.0%) of cannabis users reported that they had been in treatment during the past year as a result of their cannabis use. This is compared to the almost eight per cent (7.9%) of cannabis users with potential dependence who had received treatment during the last year.

DISCUSSION

Summary of Major Findings

Prevalence of Drug Use Among Alberta Youth During the Past 12 Months

- The most commonly used illicit drug among Alberta youth was cannabis (between 22.8% and 32.3% of Alberta youth used cannabis in the year prior to the fall of 2002).
- The next most commonly used illicit drugs were mushrooms/mescaline (7.7% to 13.1%), inhalants (4.0% to 7.3%), and club drugs (3.2% to 7.3%).

Demographic Influences on Drug Use Among Alberta Youth

- Gender and location size were not significantly related to the use of any illicit drugs.
- Inhalant, steroid and heroin/opium use was not significantly associated with any of the demographic characteristics.
- The prevalence of drug use was higher in grades 10 through 12 than in grades 7 through 9 for all illicit drugs except steroids, heroin/opium and inhalants.
- The use of cannabis and mushrooms/mescaline was significantly higher among those youth of Aboriginal ethnicity than among those of non-Aboriginal ethnicity.
- The use of cannabis, cocaine, hallucinogens, uppers, downers, club drugs and mushrooms/mescaline was significantly lower among youth that reported living with both natural parents than among youth who reported living in other situations.
- Youth's weekly income showed a significant, positive correlation with the use of cannabis, hallucinogens, mushrooms/mescaline, club drugs and uppers.

Risk Factors and the Frequency of Use Among All Alberta Youth

- Ease of access was significantly correlated with the frequency of drug use for all illicit substances.
- Having more close friends who are involved in substance use was significantly correlated with the frequency of drug use for all illicit substances.
- Ease of access to drugs and peer drug-use behaviour are significantly related.
- Parental approval was significantly correlated with the frequency of drug use for all illicit substances.
- Ease of access had the strongest relationship to the frequency of use for most substances. Peer substance-use factors were generally second in association strength, followed by parental approval.

Patterns of Drug Use Among Users

- About half of drug users reported using just one drug during the last 12 months. For four out of five of them (80%), the drug used was cannabis. Thirteen per cent reported inhalants as the drug used.
- Substances most frequently used by poly-drug users were cannabis, mushrooms/mescaline, club drugs, hallucinogens and uppers.

Frequency of Drug Use Among Users of the Drug

- Approximately one third (32.2%) of cannabis users used cannabis only once or twice during the last year while 28.4% used 21 times or more.
- For substances other than cannabis, most users used the substance only once or twice during the last year.

Cannabis Dependence and Treatment

- Almost half of past-year cannabis users (46.2%) reported no indicators of cannabis dependence.
- The proportion of cannabis users demonstrating potential dependence was 3.1%.
- Three per cent of cannabis users had been in treatment during the past year as a result of their cannabis use while 8% of cannabis users with *potential dependence* had received treatment during the last year.

Implications of Findings for the Prevention and Treatment of Substance Use

When dealing with youth in various settings, it is important to know the prevalence of drug use in the population and the frequency at which users use. First, youth make many of their decisions based on what they think others their age are doing and the desire for peer acceptance. Therefore, it is important that youth are given an accurate picture of the normal behaviour of their peer group.

Second, drug counselling for youth both in academic and health situations, as well as program design and recruitment, should take into account the prevalence and patterns of use. For example, if the target of a certain program is substance-specific (for example, cannabis use), it is important to know how many youth in a given group would be expected to be using it and at what frequency. If a program is meant to be more general, then perhaps the focus on various substances could be proportional to the prevalence of use of each substance in the target population. Based on the results of this study, about 28% of youth will be able to relate to the use of cannabis while less than 3% will be able to relate to the use of cocaine. Of course, this is not meant to undermine the importance of the less prevalent drugs (which may have even more severe effects for those involved) but rather to emphasize the importance of grounding one's approach in factual information about target audiences.

Third, the findings that almost one half of users in this study used only one drug in the last year and that most users used at a relatively low frequency further emphasize the point that a factual understanding of youth drug use is essential in dealing with this population. In almost all the cases where only one drug was used, the drug used was cannabis. This suggests that a large portion of youth drug users use cannabis, and cannabis only. It is imaginable that these "cannabis only" users would react defensively if significant adults assume that their cannabis use automatically means they are abusing it or are using other drugs. For those who are using drugs other than cannabis, it is more likely that they are using mushrooms/mescaline and ecstasy than cocaine and heroin/opium. These are important considerations for interacting with and designing programs for youth substance users.

For substances other than inhalants, steroids and heroin/opium, use increased with school grade level. For cannabis in particular, the increase appears to be especially marked as youth enter Grade 10. The rates between grades 10 and 12 were relatively consistent. This finding suggests that drug use prevention initiatives, with the goal of preventing use or prolonging the onset of use, need to begin before the junior high school years and continue through high school, adapting to transitions in adolescents' lives. This is consistent with recommendations from other sources (Hawkins et al., 1992). Additionally, the content of these programs should be age-appropriate in accordance with the scientific literature.

The finding that those of Aboriginal ethnicity have a higher prevalence of cannabis and mushroom/mescaline use than those of non-Aboriginal ethnicity supports culture-specific initiatives for Aboriginal people. This is consistent with recommendations in the literature that programs for Aboriginal people need to incorporate traditional beliefs and practices from the Aboriginal community (Cuijpers, 2002; Health Canada, 2001). Initiatives targeted at Aboriginal people should also consider the barriers specific to this group, such as the accessibility of programs and childcare.

The importance of including family members in intervention, prevention and treatment strategies is verified by the finding that those youth living with both natural parents were less likely to use several types of drugs than youth in other living arrangements as well as the finding that there is a relationship between parental approval and the

frequency of drug use. This may mean, for example, educating parents of young children about the impact of their perceptions and attitudes towards substance use, exploring parental perceptions of substance use with both youth and their parents to clarify parental position on the issue and to collaboratively explore the pros and cons of use, or linking disadvantaged families with broader social services. Family involvement, of course, requires the consideration of issues like time and childcare.

The results of the weekly income and ease of access analyses suggest that "accessibility" is a very important factor in the use of drugs among Alberta youth. This implies that actions to reduce availability of drugs should decrease the prevalence of use. Potential ways to decrease accessibility include shifting the cultural norms to more strongly oppose the use of drugs, laws (and the enforcement of laws) prohibiting use, and reducing the number of peers who are involved with drugs. The relationship between ease of access and peer drug use noted in this paper further supports the last suggestion. The findings may also support initiatives that teach youth budgeting skills and encourage them to spend their money on things other than drugs. Reducing income available for drugs may be achieved by helping them allocate their money towards other things.

The influence of peer behaviour on the use of drugs has been emphasized in the literature and is confirmed here. The more peers a youth has who are involved in drug use, the greater the likelihood of that youth also using drugs.The strong influence of peers suggests that prevention initiatives should focus on enhancing involvement with peers who do not use drugs and skills to deal with those who do. This may involve including non-using youth, the use of peer educators and counsellors, teaching refusal/ social influence resistance skills, and encouraging involvement with non-using peers, perhaps through pro-social academic and extra-curricular activities.

Summary and Conclusions

In summary, this study supports the position that strategies for reducing substance use and abuse need to cross all sections of society (e.g., family, peers, school, community). By taking a holistic, cumulative and interactive approach, we can help to reduce the harm of, and increase protection against, various risk factors in different life domains. Such an approach involves fostering anti-drug attitudes and social norms opposing drug use throughout all levels of society. This is the approach embraced both by AADAC's School Strategy and by The Alberta Youth Experience Survey in their attempts to reduce the harmful effects of substance use and abuse among Alberta youth. The factors explored in this report are just a few of the hundreds of factors believed to influence adolescent substance use, and the results should be interpreted in the broader context of the risk and protective factors framework.

In conclusion, The Alberta Youth Experience Survey 2002 has provided us with valuable insight into the substance use behaviour of Alberta youth. AADAC and others who work with youth can use this insight to help youth to lead healthy and productive lives. The information gleaned from this study will have implications for both treatment and prevention programming when it comes to Alberta youth. A current understanding of the prevalence of drug use and abuse is essential for understanding program needs in the area. Conducting The Alberta Youth Experience Survey 2002 is the first step in gaining this understanding. Future runs of the survey, anticipated every two years, will allow AADAC to monitor not only the prevalence of drug use and abuse among Alberta youth, but also trends in that prevalence. The availability of prevalence and trend information will allow AADAC to compare Alberta youth drug trends over time and with those from other provinces and other places across the globe, anticipate substance use programming needs and develop more effective prevention and treatment programs.

REFERENCES

Adlaf, E. M., & Paglia, A. (2001). *Drug use among Ontario students, 1997-2001: Findings from the OSDUS*. Toronto: Centre for Addiction and Mental Health.

Alberta Alcohol and Drug Abuse Commission (AADAC). (2003). *The Alberta Youth Experience Survey 2002: Summary Report*. Edmonton: Alberta Alcohol and Drug Abuse Commission.

Alberta Alcohol and Drug Abuse Commission (AADAC). (2003). *The Alberta Youth Experience Survey 2002: Technical report*. Edmonton: Alberta Alcohol and Drug Abuse Commission.

Centre for Addiction and Mental Health (CAMH). (1999). *Alcohol and drug prevention programs for youth: What works?* Toronto: Centre for Addiction and Mental Health.

Cuijpers, P. (2002). *Cannabis 2002 Report: A joint international effort at the initiative of the Ministries of Public Health of Belgium, France, Germany, the Netherlands, Switzerland*. Brussels: Ministry of Public Health of Belgium.

George, S., Dyer, A., & Levin, P. (2003). *The Alberta Youth Experience Survey 2002: An Overview of Risk and Protective Factors*. Edmonton: Alberta Alcohol and Drug Abuse Commission.

George, S., Munro, G., & Huebert, K. (2002). *Youth trends and risk and protective factors*. Edmonton: Alberta Alcohol and Drug Abuse Commission.

Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112, 64-105.

Health Canada. (2001). *Best practices: Treatment and rehabilitation for youth with substance use problems*. Ottawa: Health Canada.

Levin, P., & George, S. (2003). *School-based programs: Best and promising practices literature review*. Edmonton: Alberta Alcohol and Drug Abuse Commission.

Poulin, C. (2002). *Nova Scotia student drug use 2002: Technical report*. Nova Scotia: Communications Nova Scotia.

AADAC

Alberta Alcohol and Drug Abuse Commission
An Agency of the Government of Alberta

For more information, contact
your local AADAC office,call 1-866-33AADAC
or visit our Web site www.aadac.com

AADAC© 2003

ISBN 0-7785-3242-9